

## IN THE CLAIMS:

1. A light source comprising:  
a light emitting component which emits light; and  
a phosphor-containing material positioned to receive light emitted by the  
light emitting component, the phosphor-containing material converting at least a  
portion of the light to light of a different wavelength, the phosphor-containing  
material having a thickness which varies in relation to an intensity of the light  
emitted by the light emitting component.
2. The light source of claim 1, wherein the light emitting component is  
selected from the group consisting of light emitting diodes and laser diodes.
3. The light source of claim 1, wherein the phosphor-containing  
material is formed from a material which includes:  
a phosphor; and  
a light-curable material which is cured by light emitted by the light emitting  
component.
4. The light source of claim 3, wherein the light emitting component  
emits light in at least one of the blue region and the UV region of the  
electromagnetic spectrum and the light-curable material is a blue or UV-curable  
material.
5. The light source of claim 4, wherein the blue or UV-curable material  
is a dental adhesive.
6. The light source of claim 3, wherein the phosphor is a yellow-  
emitting phosphor.
7. The light source of claim 1, further including:

a layer of a light transmissive material intermediate the light emitting component and the phosphor-containing material.

8. The light source of claim 3, wherein the light emitting component  
5 includes:

a die; and  
a die attach material, the die attach material being formed from a material which is curable by light emitted by the light emitting component.

10 9. The light source of claim 2, wherein the phosphor-containing material surrounds at least a front and side edges of the light emitting component.

15 10. A light source comprising:  
a light emitting component which emits light; and  
a phosphor-containing material positioned to receive light emitted by the light emitting component and converting a portion of the light to light of a different wavelength, the phosphor-containing material having a thickness which is greater in regions where the intensity of the light emitted by the light emitting component is higher and lesser in regions where the intensity of the light emitted by the light emitting component is lower.  
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11. The light source of claim 10, wherein the light emitting component is selected from the group consisting of light emitting diodes and laser diodes.

25 12. The light source of claim 10, wherein the phosphor-containing material is formed from a material which includes:  
a phosphor; and  
a light-curable material which is cured by light emitted by the light emitting component.

13. The light source of claim 12, wherein the light emitting component emits light in at least one of the blue region and the UV region of the electromagnetic spectrum and the light-curable material is a blue or UV-curable material.

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14. The light source of claim 12, wherein the blue or UV-curable material is a dental adhesive.

15. The light source of claim 12, wherein the phosphor is a yellow-emitting phosphor.

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16. The light source of claim 10, further including: a layer of a light transmissive material intermediate to the light emitting component and the phosphor-containing material.

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17. The light source of claim 12, wherein the light emitting component includes:

a die; and  
a die attach material, the die attach material being formed from a material which is curable by light emitted by the light emitting component.

18. A method of improving color distribution of a light source emission, the method comprising;

forming a layer of a phosphor-containing curable material on a light emitting component;

energizing the light emitting component for a sufficient period of time to cure a portion of the curable material; and

removing remaining uncured curable material.

*see*  
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19. The method of claim 18, further comprising, prior to the step of forming a layer of a phosphor-containing curable material on the light emitting component:

5 forming a layer of a light-transmissive material which is free of phosphor intermediate the light emitting component and the layer of phosphor-containing curable material.

20. The method of claim 18, further comprising:

10 attaching the light emitting component to a support member, including:  
coating a back of the light emitting component with a layer  
of a curable bonding material.

21. The method of claim 20, wherein the curable bonding material is cured during the step of energizing the light emitting component.

15 22. A light source formed by the method of **claim 18**.

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